

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

ANURAPHIS LONGICAUDA, A NEW APHID INJURIOUS TO PLUM TREES.

BY A. C. BAKER.

For several years past an undescribed species of Aphid has occurred in injurious numbers upon the plum trees at Vienna, Va. This species has also been found in Ashland, Neb., by T. A. Williams and in House Springs, Mo., by H. Grubar. It attacks both the twigs and the leaves and the twigs attacked by the species are in nearly every case dead the following year. Insects are found either upon the twigs or the foliage throughout the summer and the apterous sexes are met with upon the twigs where the eggs are laid in the fall. While the spring forms are usually a dark brown, many of the summer forms are pale yellowish white and these forms are most often seen on the under sides of the leaves.

STEM-MOTHER.¹

The stem-mothers hatch about the first of April. In 1916 some of the young stem-mothers were noted on April 2nd while many of the eggs had not yet hatched. On April 8th a heavy fall of snow occurred with freezing weather and many of the stem-mothers were killed. They had not advanced during this time past the first instar.

Some of the remaining stem-mothers which were in the first instar on April 7th were placed in sheltered experiments. These moulted first from the 12th to the 14th. The other moults varied considerably but some of the stem-mothers were adult and reproducing by April 24th. Others were not reproducing until May 1st.

Length, 1.68 mm.; width of abdomen, 1.2 mm. Antennae as follows: Segment I, 0.048 mm., II, 0.048 mm., III, 0.336 mm., IV, 0.144 mm., V

¹ Type locality, Vienna, Va. Cotype slides in U. S. Nat. Mus. Coll. of Aphididae, taken by the writer; Stem-mothers, April 17, 1913; alate forms, May 5, 1913; apterous forms, May 15, 1913.

(0.108 mm. + 0.112 mm.). Segments distinctly imbricated but without secondary sensoria. Cornicles 0.24 mm. long and very distinctly imbricated, no distal flange present. Cauda about 0.128 mm.

Color brown with the appendages black or very dark. Abdomen with small black lateral spots which become large patches toward the thorax. Caudad of the cornicles a large black patch is present which more or less connects with a transverse black area on the caudal abdominal segments.

TABLE OF MEASUREMENTS OF STEM-MOTHERS.

Ant. III.	Ant. IV.	Ant. V base.	Ant. V unguis.	Cornicle.
0.336	0.16	0.112	0.112	0.224
0.32	0.112	0.112	0.112	0.24
0.336	0.128	0.08	0.048	0.24
0.32	0.128	0.112	0.096	...
0.32	0.128	0.096	0.08	0.208
0.336	0.128	0.096	0.08	0.224
0.368	0.16	0.096	0.064	0.208
0.336	0.144	0.096	0.096	0.24
0.336	0.144	0.112	0.112	0.208
0.352	0.16	0.112	0.096	0.224

APTEROUS VIVIPAROUS FEMALE.

Apterous forms occur throughout the summer in all generations. They vary considerably in color from a brown to a pale yellowish white. The first generation after the stem-mother matures about the second week in May.

Color brown or cream, some specimens apparently being all of the one color and other specimens distinctly the other color. Legs and appendages dusky or black. Black markings somewhat similar to those of the stem-mother though not so prominently indicated on the sides.

TABLE OF MEASUREMENTS OF APTEROUS FORM.

Ant. III.	Ant. IV.	Ant. V.	Ant. VI base.	Ant. VI unguis.	Cornicle.
0.304	0.224	0.176	0.112	0.16	0.336
0.32	0.208	0.144	0.096	0.144	0.32
0.304	0.192	0.16	0.112	0.16	0.32

Length from vertex to tip of cauda, 1.76 mm. Width of abdomen, 1.04 mm. Antennae with the following measurements: Segment I, 0.064

mm., II, 0.048 mm., III, 0.304 mm., IV, 0.224 mm., V, 0.192 mm., VI (0.112 mm. + 0.16 mm.). Segments imbricated but no secondary sensoria present. Cornicles 0.32 mm. long, subcylindrical, slightly tapering, distinctly imbricated and without a distal flange. Cauda, 0.112. Three pairs of very prominent lateral tubercles are present, one pair on the prothorax, one pair between the middle and hind coxae and one pair caudad of the cornicles.

ALATE VIVIPAROUS FEMALE.

Winged forms begin to appear with the first generation after the stem-mother and may be found thereafter throughout the season. Pupae of the first generation of winged forms are present during the first week in May, while the apterous forms of the same generation are just beginning to reproduce.

Color brownish. Head, thorax and appendages black. Abdomen pale brown with 5 rather large black patches on each side. Caudad of the cornicles three transverse bands of black are present which become more or less fused. Cornicles sometimes with the extreme tip pale. Wing veins heavy and margined with brown.

Length from vertex to tip of cauda, 2 mm. Antennae as follows: Seg. I, 0.048 mm., II, 0.408 mm., III, 0.24 mm., imbricated and armed with 5 or 6 subcircular sensoria forming an even row, IV, 0.208 mm., imbricated but without secondary sensoria, V, 0.192 mm., similarly imbricated but lacking secondary sensoria, VI (0.144 mm. + 0.176 mm.). Forewings, 2.3 mm. long and 0.96 mm. wide at their widest diameter. Hind wings, 1.52 mm. long. Wing veins heavy. Cornicles, 0.272 mm. long, subcylindrical and prominently imbricated. The distal extremity has no distinct flange but is cut off squarely or rounded. Cauda about 1.28 mm. long.

TABLE OF MEASUREMENTS OF ALATE FORM.

Ant. III.	Ant. IV.	Ant. V.	Ant. VI base.	Ant. VI unguis.	Cornicle.
0.272	0.192	0.176	0.128	0.16	0.256
0.192	0.176	0.16	0.112	0.16	0.24
0.256	0.16	0.176	0.128	0.16	0.224
0.192	0.176	0.176	0.128	0.176	0.24
0.256	0.176	0.16	0.128	0.16	0.24
0.24	0.176	0.176	0.096	0.144	0.24
0.288	0.208	0.192	0.144	0.176	0.256
0.32	0.208	0.176	0.128	0.192	0.272
0.288	0.208	0.192	0.128	0.16	0.272
0.288	0.176	0.176	0.128	0.192	0.272

